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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/312,073	05/13/1999	MINORU USUI	448563/163	2072

7590 09/17/2003

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EXAMINER

NGHIEM, MICHAEL P

ART UNIT	PAPER NUMBER
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2863

DATE MAILED: 09/17/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/312,073

Applicant(s)

USUI ET AL.

Examiner

Michael P Nghiem

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 May 2003, 23 June 2003, 24 July 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3,4,6-23,36-39,41-65,67-73,83-90 and 92-125 is/are pending in the application.
- 4a) Of the above claim(s) 94 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1,3,4,6-14,36-39,41-57,62-65,67-73,83-90,92,93,95,96 and 114-125 is/are allowed.
- 6) ☒ Claim(s) 15-18,21-23,58,59,61,97-100,102,106-110,112 and 113 is/are rejected.
- 7) ☒ Claim(s) 19,20,60,101,103-105 and 111 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 May 1999 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 35.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

The Amendments filed on May 27, 2003, June 23, 2003, and July 24, 2003 have been acknowledged.

Election/Restriction

1. Newly submitted claim 94 is directed to an invention that was non-elected without traverse in paper number 11 for the following reasons: "... engaging recess (177) is engageable with a lifter (176) ..." is shown in Fig. 13 of non-elected Invention V.

Accordingly, claim 94 is withdrawn from consideration as being directed to a non-elected invention.

Specification

2. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: Claim 101, "...an opening area of the recess is dimensioned so as to prevent the film from closing the recess by the action of atmospheric pressure" is not described in the specification.

Drawings

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the protruding portion having a height larger than a thickness of the film is formed on the outer edge of the lid (e.g. claims 102, 105), an annular groove is formed adjacent to the protruding portion (e.g. claim 103), the annular groove communicating through **a notch with the recess disposed at an end portion of the ink cartridge** (e.g. claim 104), the first film is removably adhered to cover the narrow groove and **the second film is adhered across** the first film, to thereby form the capillary (e.g. claim 111) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Is the protruding portion part (62a) of the film (62) (Fig. 7c)?

Claim Objections

4. Claim 91 is objected to because it has been cancelled (see Amendment filed on March 5, 2002, paper number 23). Claim 105 should depend on claim 102 (instead of claim 99) to provide proper antecedent basis for the protrusion portion. Appropriate correction is required.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 15-18, 21-23, 58, 59, and 61 are rejected under 35 U.S.C. 102(e) as being anticipated by Miyazawa et al. (US 6,250,750).

Miyazawa et al. discloses all the claimed limitations including:

- an ink jet printer (Fig. 11), comprising:
 - a carriage (101), said carriage having a projecting member (116, 117) and an ink supply needle (119) extending therefrom;
 - a print head (118) including a plurality of nozzles (nozzles of 118) through which ink is ejected mounted on said carriage;
 - an ink cartridge (120), said ink cartridge being mounted on the carriage (Figs. 11, 12's) and, said ink cartridge comprising:

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- a housing (1) having walls (walls of 1) and an opening (opening covered by 20, Fig. 1), said housing containing ink, a top wall (20) of said housing being constituted by a lid (Fig. 1) covering said opening of said housing (Fig. 1);

- at least one ink chamber (chamber of 1) defined by said housing and said lid (Fig. 1);

- an ink supply port (opening of 10) formed on one of the walls of said housing (bottom wall of 120);

- at least one recess (15, 31, 33) forming a space in an outer surface of said lid (Fig. 1) when the ink cartridge is packed under a vacuum condition (column 4, lines 47-51), the pressure within said space being lower than the atmospheric pressure when the ink cartridge is packed (column 4, line 51, column 9, lines 15-17);

- a seal member (35, 126) adhered to the outer surface of said lid (Figs. 4, 14), wherein said recess is isolated from an interior of the ink cartridge and exposed to an exterior of the ink cartridge (33 is exposed when tail of 35 is removed, Fig. 4) when the seal member is adhered to the outer surface of said lid (column 5, lines 42-45);

- said recess is partially covered by said seal member adhered onto the outer surface of said lid (Fig. 14);

- a portion of said seal member is removable, and said recess is disposed under the removable portion of said seal member (tail of 35, 126 is removable);

- said recess (31, 33) is disposed on a part of said lid which is spaced apart from said ink supply port (Fig. 1);

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- plural number of said recesses (30, 31, 33) are formed in the outer surface of said lid;

- a fine, circuitous groove (32) formed in one surface of said lid where said recess is formed (Fig. 4);

- an air communication hole (hole of 31) formed in said lid for communicating the interior of the ink cartridge with the atmospheric air, said air communication hole being disposed in the vicinity of said recess (Fig. 1).

Claims 97-100, 102, 106-110, 112, and 113 are rejected under 35 U.S.C. 102(e) as being anticipated by Miyazawa et al. (US 6,250,750).

Miyazawa et al. discloses all the claimed limitations including:

- an ink cartridge (120) for an ink jet printer (Fig. 11), comprising:

- an ink cartridge main body (body of 120) having an ink chamber (chamber of 120) communicating with an ink supply port (opening of 10);

- a lid (top wall) covering an opening portion of the ink cartridge main body (Fig. 1), and having an atmosphere communication port (31) through which the ink chamber is communicateable with atmospheric air (Fig. 1),

- a narrow groove (32), sealed by a film (35) to define a capillary, is formed on a surface of the lid (Fig. 4), one end of the narrow groove communicating with the atmosphere communication port (Fig. 4), and the other end of the narrow groove communicating with an opening to be open to the atmospheric air (top opening of 31),

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- a recess (33) for storing a negative pressure under vacuum is formed on a portion of the outer surface of the lid where the narrow groove is not formed (33 is sealed by 35, Fig. 4);

- a plurality of the recesses for storing the negative pressure under vacuum are formed (30, 31, 33) so as to mutually communicate with each other (Fig. 1);

- the recess is partitioned by protruding portions into a plurality of recesses arranged in a grid shape (Figs. 1, 10);

- at least one of the protruding portions has a notch (notch of recess) by which the recesses located opposite to the same ink chamber mutually communicates with each other (Fig. 1);

- at least a portion of the film, which is not peeled off from the lid, is located inwardly of an outer edge of the lid, and a protruding portion (protruding portion of 35) having a height larger than a thickness of the film is formed on the outer edge of the lid (Fig. 4);

- a rib is formed on a back surface of the lid opposite to the narrow groove (Fig. 3's);

- a rib for pressing a porous member is formed on a back surface of the lid, and the narrow groove is opposite to the rib (Fig. 3b);

- the narrow groove is defined by two protruding portions spaced from each other (Fig. 5);

- the film is adhered to surfaces of the two protruding portions to define the capillary for atmosphere communication (Figs. 4, 5);

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- the opening of each of the narrow grooves are enlarged toward an end portion thereof, and the plurality of the openings are arranged spreadingly in a fan shape (Fig. 4);

- the opening and the recess are covered by a film (35) removably adhered to the lid (Fig. 4);

- the ink cartridge is packed by a packing member (126) of an air impermeable film under a vacuum condition (column 4, lines 50-51).

Allowable Subject Matter

6. Claims 1, 3, 4, 6-14, 36-39, 41-57, 62-65, 67-73, 83-90, 92, 93, 95, 96, and 114-125 are allowed.

7. Claims 19, 20, 60, 101, 103-105, and 111 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Reasons For Allowance

8. The combination as claimed wherein said recess is disposed on a part of said lid which is engageable with a member of the carriage when the ink cartridge is

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mounted on the carriage (claim 19) or a plurality number of engaging recesses for engaging a plurality of projections (claims 36, 62) or at least one engaging recess formed on said lid, said engaging recess being engageable with a projecting member of the printer when the ink cartridge is correctly mounted on the printer and said engaging recess being at least partially covered by a film which can be removed from the ink cartridge to create an air communication port to the atmosphere (claims 57, 87) or a mounting lever mounted on the carriage wherein a projection projecting from the mounting lever is engageable with said recess (claim 60) or said engaging recess receiving the projecting members of the printer, wherein the engaging recess and the projecting members of the printer align the ink supply port with the ink supply needle prior to insertion of the ink needle into the ink supply port (claims 92, 95) or an opening area of the recess is dimensioned so as to prevent the film from closing the recess by the action of atmospheric pressure (claim 101) is not disclosed, suggested, or made obvious by the prior art of record.

Response to Arguments

9. Applicant's arguments filed on May 27, 2003, June 23, 2003, and July 24, 2003 have been fully considered but they are not persuasive.

With respect to the 35 USC 102 rejections, Applicants argue that nowhere does Miyazawa disclose or suggest that the lid of the ink cartridge have a recess, much less that such a recess be covered with a sealing member in a manner that allows the recess to communicate with its surroundings.

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Examiner's position is that Miyazawa discloses a lid (20) having a recess (33) covered with a sealing member (35). When the tail of (35) is removed, recess (33) communicates with the surroundings while (35) adheres to the lid (20) (column 5, lines 42-45).

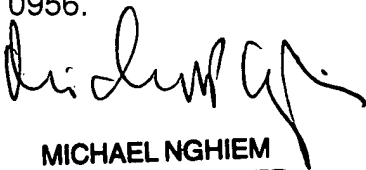
Contact Information

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Nghiem whose telephone number is (703) 306-3445. The examiner can normally be reached on M-H from 6:30AM – 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Barlow can be reached at (703) 308-3126. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7724 for regular communications and (703) 308-5841 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-

0956.



MICHAEL NGHIEM
PRIMARY EXAMINER
Michael Nghiem

September 15, 2003